

Claims

1. Method of producing structures from functional materials, in particular electrical functional materials, in which in a first method step the substrate (1) is pretreated in such a way that at least a first and a second region (3, 5) are formed with different surface tensions, the first region being configured in the shape of the structure to be produced, and in a second method step the functional material is applied to the substrate, the functional material (8) being configured so that it is deposited only in the first region and thus the desired structure is formed from functional material, characterised in that in a first method step first of all a homogeneous surface tension of the substrate is produced which is higher relative to the normal state of the substrate and then the surface tension of the substrate is reduced to a lower value in the first or second region.
2. Method as claimed in Claim 1, characterised in that the production of the homogeneous surface tension takes place by a corona treatment.
3. Method as claimed in Claim 1, characterised in that the production of the homogeneous surface tension takes place by a chemical treatment.
4. Method as claimed in Claim 1, characterised in that the production of the homogeneous surface tension takes place by a mechanical and/or tribological treatment.
5. Method as claimed in Claim 1, characterised in that the production of the homogeneous surface tension takes place by a combination of Claims 2 to 4.
6. Method as claimed in Claim 1, characterised in that the reduction of the surface tension takes place by contact with a contact structure (6).
7. Method as claimed in Claim 1, characterised in that in the second method step the functional material is applied in a rolling process in which a roller covered with functional material is rolled on the substrate surface, the functional material being deposited only in the region with suitable surface tension because of the different surface tensions.

8. Method as claimed in Claim 1, characterised in that in the second method step the functional material is applied in a spraying process in which the substrate surface is sprayed with the functional material, the functional material being deposited only in the region with suitable surface tension because of the different surface tensions.

9. Method as claimed in Claim 1, characterised in that in the second method step the functional material is applied in a dipping process, in that the substrate is dipped into the fluid functional material, the functional material being deposited only in the region with suitable surface tension because of the different surface tensions.

10. Method as claimed in Claim 1, characterised in that in the second method step the functional material is applied in a curtain coating process, in that the substrate is guided past one or several fluid jets of the functional material, the functional material being deposited only in the region with suitable surface tension because of the different surface tensions.

11. Apparatus for carrying out the method as claimed in one or more of the preceding claims, comprising a means (2) for producing a homogeneous surface tension of the substrate which is higher relative to the normal state of the substrate, a means (4) for reducing the surface tension of the substrate in the first or second region to a lower value as well as a means (7) for application of the functional material to the substrate.

12. Apparatus as claimed in Claim 11, characterised in that the means (2) for producing a homogeneous surface tension is formed by a means for corona treatment.

13. Apparatus as claimed in Claim 11, characterised in that the means (4) for reducing the surface tension is formed by a roller or plate which comes into contact with the surface of the substrate and has raised contact structures, only the raised contact structures of the roller/plate coming into contact with the surface of the substrate.